Man and the Earth

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Authorized by the
Minister of Education
Thomas L. Wells

For study and optional
implementation
during the
Intermediate Division
Cyclic Review

Man and the Earth

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This Interim Guideline is published at a time when the Ministry of Education is reviewing curricula and patterns of organization within the Intermediate Division of Ontario schools. The document outlines new approaches and programs for study, for discussion, and for optional implementation during the review period.

The Ministry welcomes comments and suggestions for improvement of future guidelines in this and other subject areas. To be considered in the current review, the comments should be forwarded to the appropriate regional office to the attention of the Regional Director by February, 1974.

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Introduction

In any school in which this Guideline is implemented, it then supersedes *Curriculum I.7 1962,* and the programs for grades 9 and 10 as described in *Curriculum R.P. 7, 1962.*

The guideline consists of two parts.

Part A provides basic information about the nature of geographic studies in schools. Course planners may find it useful as they develop objectives, choose methodologies, and formulate questions that geographic studies can help to answer. School administrators may find it a helpful reference as they plan the role that geographic studies will play in the total program of the school.

Part B suggests forms of organization that will give students new horizons and fresh insights in each year of the Intermediate Division. During the four-year span, most students attend more than one school and experience more than one form of school organization. Co-operation among schools in establishing a framework will help to ensure that students acquire a basic understanding of man's occupation and use of all areas of the earth.

Part A

Planning Geographic Studies

Studies in Geography involve man, his environment, and the interaction of the two. Students entering the Intermediate Division in Ontario schools have usually acquired first-hand experience of only a small percentage of the earth's surface. Although their opportunities for travel and their exposure to the many means of communication may have been greater than those of any previous generation in history, the world that they study is complex and ever changing. In order to broaden their knowledge of the earth as the home of man, students must seek clarification of the patterns and processes that result from the interaction of the two key elements.

To accomplish this, students face no simple task. The earth is enormously complex, and patterns and processes are often obscured by vast amounts of detail. It is important, therefore, that studies in Geography have a definite purpose, maintain clear points of view, and promote precise ways of thinking. Without these qualities, studies may become an inventory of the earth's contents rather than a search for more adequate explanations of the interrelationships of man and his environment. Geographic studies depend on many fields of knowledge for information. It is not the specific information, however, that is geographic, but the frame of reference within which the data are examined. Studies become geographic through application of the questions, viewpoints, and techniques of the subject.

Both social and physical sciences are involved in geographic studies. Geography is a social science because man's needs, values, and cultures are forces that help to determine how he will live. As man organizes his activities over the earth's surface, the landscape is modified in many ways. Political systems, economic objectives, and technological competence are just a few human factors that affect the way in which the earth is used. At the same time, studies must be firmly rooted in the physical sciences. Climate, bedrock, surface features, and soils, while providing opportunities also put constraints on man's activities. Choices are restricted by his environment. Man is not completely controlled by his environment, but neither does he, in turn, have complete mastery over it. Recognition of this relationship will provide the basis for a broad range of studies that help students to think geographically.

Throughout their experience in the Intermediate Division, students should be encouraged to incorporate both the human and the physical dimensions in their geographic studies.

In their organization, teachers should take care that well-defined ideas and principles be at the core of units and courses undertaken by students. The following pages present a number of broad ideas that can be employed in organizing studies.

Virtually all studies will require the application of one or more of these central ideas and organizing principles. They represent the distillation of much thought arising from a broad range of experience. Their use will allow classes freedom in the selection of topics, questions, problems, or themes, while retaining an essential focus on key ideas. Teachers will find them helpful in setting objectives, in finding ways to reach goals, and in evaluating students' maturity in encounters with new or more complex problems.

Inevitably, studies that employ ideas and principles will cut across systematic studies of physical and social sciences, the arts, and the humanities. Man's attitudes and values are reflected in the landscape and many of his practices in the use of the environment will raise questions in students' minds. Students often express concern for what ought to be as well as what is.

Teachers can help students to put contemporary concerns into perspective. Many studies can be undertaken directly as a result of current issues and questions of public policy. In cases where studies focus on a problem, students will be led to information whether or not it lies neatly within a particular subject field. For these reasons, Geography teachers should find many opportunities to join other teachers in planning and teaching interdisciplinary units of vital interest to students.

Basic Ideas in Geography

Regionalism

Regions are areas of the world characterized by enough similarities to be considered as units. Because a region is always defined in terms of specific criteria, many kinds of regions exist. In fact, expressions that are part of common English usage, such as the *Corn Belt,* the *Hindu world,* the *slum,* or the *desert,* are based on the identification of a region using specific criteria. A regional approach to studies concentrates on defining, describing, analysing, synthesizing, and generalizing to arrive at an understanding of the nature of the area under study.

Students will find many uses for a regional approach. In some cases, such as the study of the locality, it is of interest for its own sake. Often it will be useful in answering questions of interest to the student. Questions such as *Why does California attract immigrants?* or *Should there be a United States of Europe?* may be explored through studies that focus on the essential characteristics of a region. Because both physical and human factors are involved and location is often a key to understanding, the answers are never simple. After careful study, students can attach their own weighting to the importance of each variable that must be considered.

Areal Differentiation

Although there is repetition of similar physical characteristics, similar cultural background, or similar economic objectives over the surface of the globe, all places on the earth's surface are unique. Without some attempt to organize information in a systematic way for study purposes, it would be difficult to view the earth as anything but a chaotic mass of facts. The skill of organizing the globe into significant patterns is a necessary part of studies in geography.

Typical forms of this skill are reflected in maps that divide the earth into parts on the basis of climatic patterns or types of vegetation. With greater demands on land in North America, students may well become more familiar with land-use maps, soil-capability maps, or maps that classify land for various purposes. It is vital to students' understanding, however, that culture, value systems, and political and religious systems be seen as main causes of differences and similarities from one area to another. Every opportunity should be given to allow students to see how differences in culture affect man-land relationships in other parts of the world.

Such maps, of course, are only the end products of the process of seeing differences and likenesses. It is the process of perceiving and explaining the patterns that is important for students. Teachers have a responsibility here to assist students in getting mental pictures of reality that are as vivid and accurate as possible.

As with regions, some studies in differentiation are worthwhile in themselves. A question such as *Should Northern Ontario be a separate province?* involves a number of problems in areal differentiation. In what ways is Northern Ontario different from the south? Are there significant differences in location, cultural background, economic base, natural characteristics, population distribution, and transportation problems? Where might the border be drawn? The political question raises a large number of geographic questions that will cause students to seek patterns and consider their importance in a particular setting.

Spatial Interaction

Many kinds of linkages exist over the earth's surface. Some are natural such as rivers or the migrations of birds. Others have been developed by men for trade, transportation, or communication. Both human and natural linkages interact, however, so that virtually every act of man or nature affects both other men and the natural environment. Thus a bridge, a flood, a change in government, or a tariff agreement may have far-reaching and often unpredictable effects. Geographic studies must be concerned, therefore, with circulation and flow over the earth's surface.

When students undertake to find where the power they use is generated, how storms affect Southern Ontario, or how autos are assembled, they will discover the countless connections and interacting forces present over the earth's surface. Particular types of recording and reporting techniques are often useful in such studies. These include the use of simple models, simple statistics, and flow-charting.

The Support of Life

Life, as we know it, exists only in a thin layer in immediate proximity to the earth's crust, and even within this envelope population is far from evenly distributed. Many locations become highly desirable and are capable of supporting dense populations or providing superior material benefits. Their value may rest on many factors: agricultural fertility, strategic position, and scenic amenities are just a few. Many other areas, on the other hand, remain largely empty and until now have defied development.

Studies of population take students into many fascinating topics including migration, urbanization, and the diffusion of culture. Key questions are related to the support systems that must provide food, clothing, and shelter as population growth puts increasing pressure on the natural environment. Students should become aware of man's relationship to the web of life in nature that sustains him.

Studies involving the life layer can help students to see how the earth's capacity to support human populations has been extended by such means as resettlement, trade, mechanization, irrigation, and control of disease. Potential sources of support such as oceans, improved plant varieties, and fertilization may be considered as well. Each method has its disadvantages and limitations, however, and studies should often pose the critical question, *How long can population growth continue to take place?*

Resources

To support his life on this earth, man must have resources. Resources, however, are culturally defined and only have value when seen to be useful by men who are aware of them. In geographic studies, the definition of resources must be broad and include anything man finds useful in gaining a livelihood. In this definition, capital, knowledge, location, or political organization may be considered resources as much as minerals, fish, forests, or soils.

Answers to questions of resource use are often based on a system of values. Wise use and management of both human and natural resources are important aspects of resource questions and of particular concern to Canadians. Should the Niagara Fruit Belt be preserved? How long can the United States consume over one-half of the world's annual use of fossil fuels? Are international agreements on pollution control necessary?

In the course of their studies, students will find that these become key questions in human affairs. Discussion of the implications of resource use should bring out the number of facets to be considered in every crucial decision. It should also permit students to develop rational attitudes based on an intelligent understanding of resource issues.

Man The Chooser

The earth reveals countless examples of man's restless struggle to alter the landscape, transforming it to suit his purposes. In any situation, man is faced with opportunities and constraints. With the tools of his culture, he has been able to become a dominant force, choosing the ways in which he will use the natural setting.

This understanding is a useful one for students. It helps to explain why cities have parks, why lakes become polluted, or why Rotterdam became a great port. Studies that examine the importance of choice in man's use of the earth inevitably lead to questions of the values of individual members of society. Whether land should be used for farming or urban development is a choice that requires a number of value judgements, some of which must be settled in the political arena. Where studies involve policy issues, students will get an excellent opportunity to examine the factors on which decisions have been made and to decide whether past decisions on environmental use have been wise.

Constant Change

Recognition that the earth is in a constant state of flux helps students to understand the dynamic world of the present, and to accept that the present is a result of the past and that the future will be different again. When change is accepted as a general rule, the nature, rate, and impact of change become important variables in understanding the world. Although a man may be scarcely aware of geologic processes in the span of his lifetime, a change in taxes or subsidies may affect his life immediately.

Students will have to evaluate the effect of change in virtually every study they undertake. Modern China shows the effects of political change on the traditions of a people; the culture of Metropolitan Toronto shows the effects of recent immigration; the supermarket and shopping plaza have helped to alter the shape of North American cities. The first views of the earth from space gave most of the world's population a new understanding of the nature of the earth.

Taking note of the degree and effects of change is a part of the simplest exercise in description and explanation. Some classes may wish to go beyond this, however, to investigate change in a different way. The use of various kinds of predictive techniques to see the results of present trends or the use of simulated situations to show effects of a change in variables may be of interest to students. Trends may have short or long-range effects. Teachers will realize, of course, that prediction can only be based on the known and that the future inevitably brings surprises.

A Global Viewpoint

Events in the twentieth century should make it much easier for this generation of students to grasp the concept of earth as a spaceship or of men as inhabitants of a global village. Satellite photographs of earth are commonplace; goods from around the world are available in every store.

Encouraging the development of a global viewpoint will be one of the key objectives of Intermediate Division studies in Geography. Many of the important political questions today and in the future are questions that affect the entire world. Only with a global view is it possible to see that oceans may be barriers or links, that pollution problems are immediate and remote, or that international co-operation is based on goodwill and self-interest.

Frequent return to a global view serves other practical purposes as well. Studies on other scales, local, regional, national, or continental, can be fitted into their appropriate place in the total scheme of things. Processes in physical geography such as vulcanism or air mass movement can be seen on a world stage. The significance of technological developments such as supersonic transports, remote sensing, or communications satelites can be weighed. With a global perspective, many facts, such as the size of the world's population by continents, become more real. Canadians in particular should be well aware of their location on the globe and the distance and direction from neighbouring nations.

The Round Earth

The geographer, constantly faced with the problem of presenting reality in an abstract form, relies on a wide variety of techniques, but perhaps his most useful contributions to the organization of knowledge rely on graphic representation. If students are to employ the tools of the geographer in their studies, they must become familiar with a variety of graphic techniques.

Maps, although they are the essential tools of geography, are imperfect at best. The impossible task of depicting a round earth on flat paper makes compromises necessary. Symbols must be chosen to represent reality and maps must be selective of data. In conveying information, thought must be given to the best kind of map for the purpose at hand.

To use maps effectively, students will have to know something about their qualities and their limitations. This means that teachers will be called upon to introduce students to the use of projections, lines, scale, colour, shading, and symbols on maps. Because map design requires skills of selection and classification, the production of various types of maps by students in support of their studies enables them to practise these skills.

While cartography may be recognized both as a science and as an art form worthy of study for its own sake, students will use maps primarily as sources of information or as ways of organizing knowledge. Familiarity with their use will help them to visualize the earth in three dimensions, to construct cross-sections, or to correlate data from different sources.

Although maps are key ways of presenting information visually, they are not the only way. Globes, photographs, films, sketches, models, graphs, and diagrams are others in common use. The gradual building of facility with these tools will help the student to get a clearer grasp of the variety and complexity of the earth's features.

Skill Development

The deepening of knowledge of the human and physical world fulfils one objective of a program in Geography. At the same time, however, teachers can help students to grow by introducing them to skills that have broad applications. Some kinds of skill development are common to virtually all school subjects: posing questions, gathering data, separating the important from the unimportant, organizing significant information in an orderly way, thinking clearly, critically, and precisely, reaching conclusions that are as valid and objective as possible, and communicating thoughts in oral and written form. These are an essential part of any Geography program as well.

Geographic studies should also provide students with opportunities to develop techniques of inquiry, especially with respect to areal relationships. These include the following:

- Observation and measurement to obtain first-hand data - for example, traffic counts
- Selection and classification of information to identify significant likenesses and differences - for example, comparison and contrast of two types of farms
- Use of significant criteria to organize facts and perceive patterns - for example, population statistics
- Assessment of the degree of cause and effect in observed relationships - for example, the decline of an industrial area
- Communication of information and ideas in a variety of visual forms - for example, making maps and preparing charts and diagrams
- Use of photos to extract information and make inferences by observing, recording, analysing and hypothesizing - for example, satellite reconnaisance to show cloud cover and wind systems
- Reading and interpretation of information obtained from maps, charts, tables, and diagrams - for example, topographical maps of local area or flowcharts of steel production
- Adjusting to the use of maps at different scales - for example, 1:25,000 and 1:5,000,000
- Recognizing the validity of generalizations and conclusions derived from studies at varying scales - for example, the study of a single factory as compared with the study of an industry
- Making predictions based on sound evidence - for example, forecasting population trends and pressure on land
- Use of sample studies to develop a sense of reality
- Design and construction of simple instruments and three dimensional models

Teacher References

Bacon, Phillip, ed. *Focus on Geography: Key Concepts and Teaching Strategies.* Washington: National Council for the Social Studies, 1970.

This series of readings by U.S. College professors is divided into two parts: (a) concepts and techniques (b) teaching and learning. The ideas would be useful to teachers planning curriculum.

Ball, John M.; Steinbrink, John E.; and Stoltman, Joseph, P., eds. *The Social Sciences and Geographic Education: A Reader.* New York: John Wiley and Sons, 1971.

Many worthwhile articles are included in this collection of readings. The sections on concepts, methods, teaching models, and geography in the curriculum are especially useful.

Beyer, Barry K.; and Penna, Anthony N. *Concepts in the Social Studies.* Washington: National Council for the Social Studies, 1971.

This is an inexpensive publication of the N.C.S.S. that provides readings from a variety of sources. These readings help to clarify the meaning of concepts in education.

Briault, E.W.H., and Shave, D.W. *Geography in and out of School.* London: George G. Harrap & Co., 1960.

This is a brief book on field work including both rural and urban studies. Considerable emphasis is placed on field mapping and sketching techniques.

Briggs, K. *Fieldwork in Urban Georgraphy.* Edinburgh: Oliver & Boyd, 1970. (Agent: Clarke Irwin.)

A short explanation of the principles of urban geography is followed by a number of British examples of methods of field work. The maps, charts, and survey schemes are clearly illustrated and provide a basis for a variety of studies.

Broek, Jan O.M. *Compass of Geography.* Columbus, Ohio: Charles E. Merrill Books, 1966.

The development of geographic thought and practice is related in the first half of this book. The second half outlines some specific methods of developing geographic techniques and concepts.

Cross, M.F., and Daniel, P.A. *Fieldwork for Geography Classes.* London: McGraw-Hill Book Co., 1968

Although the illustrations and examples are British this book presents simple but practical explanations of both urban and rural field-study techniques. Topics include mapping, sketching, diagrams, charts, graphs and transects.

Gabler, Robert E., ed. *A Handbook for Geography Teachers.* Normal, Ill.: National Council for Geographic Education, 1966.

Introductory chapters of the book provide a perspective on geography as a discipline. Key topics such as *"Weather and Climate"* and *"Population Geography"* are fully developed in individual chapters.

Gopsill, G.H., and Beesley, Frank. *Practical Geography: Exercises with Models and Improvised Equipment.* London: Macmillan and Co., 1964.

As the title suggests, this book gives practical suggestions and directions for the design and construction of instruments and models. Exercises suitable for Intermediate students are included.

Gopsill, G.H. *The Teaching of Geography.* London: Macmillan and Company, 1966.

This is the third edition of the book first published in 1956. It provides a basic background on teaching techniques.

Hardwick, Francis C. *Teaching of History and Geography.* Toronto: W.J. Gage, 1967.

This publication is valuable as a teacher's methodology manual for the preparation of units of study. The eleven chapters incorporate many ideas and concepts necessary to a broad geographic education.

Hillary, V., and Hillary, D. *Canadian Source Book of Free Educational Materials.* Calgary: C.E.R.T. Co., 1969.

This is an excellent resource for teachers seeking free materials from government and commercial sources. A 1970-71 supplement is available.

Hillary V., and Hillary D. U.S. *Free and Inexpensive Educational Materials for Canadian Educators.* Calgary: C.E.R.T. Co., 1969.

One of the *Canadian Source Book Series,* this volume provides hundreds of U.S. sources of free and inexpensive materials.

Hopkins, Muriel F.S. *Learning Through the Environment.* Toronto: Longman Canada Limited, 1970.

This is a practice book of exercises that can be carried out in the local environment. It is written for Juniors, but many of the exercises are well suited for Intermediate students.

International Geographical Union, Commission on the Teaching of Geography. *UNESCO Source Book for Geography Teaching.* London: Longmans, 1965.

The book contains examples of various teaching techniques, lesson and course planning. It contains chapters on equipment and the geography room and an international source list of books and materials.

Incorporated Association of Assistant Masters in Secondary Schools. *The Teaching of Geography in the Secondary Schools.* Toronto: Cambridge University Press, 1967.

This book has a broad cross-section of historical development, aims, methodology, and evaluation in geography. Although it contains extraneous material, there is considerable material of interest to teachers.

James, L.B., and Crape, L. *Geography for Today's Children.* New York: Appleton Century-Crofts, 1968.

The authors present a case for the teaching of geography using relationships. The approaches are suitable to the earliest levels of school and up to secondary school.

Jones, P.A.. *Fieldwork in Geography.* Toronto: Longman Canada Limited, 1968.

This book has a wealth of ideas for field work suited for various age levels. There are sections on planning and follow-up.

Kurfman, Dana C., ed. *Evaluation in Geographic Education.* Belmont, Calif.: Fearon Publishers, 1971.

The ten chapters of this book have been written by recognized authorities in geographic education and deal with evaluation in Geography in the elementary and secondary schools. Evaluation techniques are outlined for both the affective and cognitive areas. The need to tie evaluation in with objectives is clearly recognized.

Long, M., and Roberson, B.C. *Teaching Geography.* London: Heineman Educational Books, 1966.

Beginning with their view of geography as a suitable means to educate, the authors provide a wealth of ideas on methods, curriculum development, and evaluation. There is a strong plea for reality in the teaching of Geography.

Monkhouse, F.J. *A Dictionary of Geography.* London: Edward Arnold, 1970. (Agent: Macmillan Co. of Canada Ltd., Toronto)

Over 3,400 of the more commonly used geographical terms are clearly and simply defined in this dictionary. It is useful for both teachers and student use.

Morris, John W., ed. *Methods of Geographic Instruction.* Lexington, Mass.: Ginn and Company (College Division)

This book contains readings from a wide variety of authors on different methods and approaches to geography in the classroom. Teachers would find it useful in the planning and preparation of lessons.

Senathirajah, Nallamina, and Weiss, Joel. *Evaluation in Geography.* Toronto: The Ontario Institute for Studies in Education, 1971.

This book focuses attention on defining educational objectives in geography. Suggestions are given for constructing tests, interpreting data, and reporting student progress.

Walford, Rex. *Games in Geography.* Toronto: Longman Canada Limited, 1970.

This small paperback describes the theory of gaming and follows with six examples of games in geography. Some classroom experiences with games are described.

Part B

The Organization of Courses of Study

The broad range of objectives and the limitations of time make advance planning of courses of study in Geography a necessity. Part B of this guideline offers alternative forms of organization which teachers may find helpful.

In the implementation of the programs described below, the unit is considered as the basic building block for the construction of courses. A unit may be of varying lengths, so that the number making up a course could vary widely, but most will occupy two to six weeks of time. A unit system provides a flexible form of course organization and will permit courses to be organized over a full year or a part of a year. Each unit allows the development of specific objectives under the general headings of knowledge, attitudes, and skills.

Where school timetables and organization permit, a unit system will allow co-operation among teachers to give a broader base to studies.

An examination of current Intermediate Division guidelines will reveal numerous opportunities for relating subjects that provide supporting viewpoints. Artists and poets, for example, show a keen awareness of landscape. Novelists and dramatists recognize the significance of place in the development of character and plot. As well as being raw material for industry, metals have physical properties, geological associations, and historical significance. These are only a few examples of the many natural associations that occur among subjects. Where themes, issues or concerns become the focus of units of work, the breadth of a study can be increased.

An important outcome of co-operative planning among teachers may be student recognition of the value of a variety of viewpoints in dealing with a topic. On many issues, even knowledgeable persons hold widely varying viewpoints. Students should get opportunities to see how approaches to issues vary according to the perspectives, values, and objectives of individuals or groups.

Students should be involved in the planning process. Teachers, however, must take the responsibility to see that a balanced set of objectives is reached. Careful planning by teachers will ensure that studies are suited to the interests and capabilities of students, that the time allocated to the pursuit of a study is consistent with its objectives, and that a variety of methods and viewpoints are employed from unit to unit.

Each of the five sections that follow offers a different format for the organization of courses of study. Studies of the locality are considered in a separate section because achievement of the objectives that it describes will require some degree of co-operation among teachers across the full span of the Intermediate Division. Approaches to the objectives described for each year's work will be affected by the forms of school organization that exist across the province. It is the intent of the program, however, that a significant treatment of world areas precede a course in Canadian studies.

The Locality

The locality and direct experience in the field are considered to be vital aspects of Intermediate Division studies.

North America

The home continent is explored using units based on a variety of themes.

The Southern Continents

Men interact with distinctive environments to produce patterns of development.

Europe and Asia

A gigantic land mass is studied for its diversity, unity, and world significance.

Canada

Contemporary Canada reveals strengths, weaknesses, and opportunitites for the future.

Locality Studies

If students are to comprehend the many ways in which men interact with their environment, the area in which they live can provide the best examples. No environment can provide more opportunities for discovery of patterns or explanation of processes than one to which students have immediate access. In this guideline, the community is considered an integral part of the course content for the Intermediate Division.

Decisions on the extent and nature of local studies can be worked out best by co-operating teachers at the local level. In some areas, a comprehensive unit on the community may be a part of one year's work. In other cases, particular aspects of the local geography may form one part of each year's work. Comparison and contrast with local conditions is a useful way of illuminating principles that emerge from studies in other areas of the world.

Because every Ontario community is unique, no single approach to a local study will be practical. The following list of topics may suggest ideas for the organization of studies based on the locality of the school:

- The human and natural characteristics that make this area unique
- The character of a larger segment of Ontario as reflected in this area
- The changing pattern of land use in this community over time
- The economic base of this community
- Links this community possesses with the rest of Ontario, Canada, and the world
- The ethnic origins of the residents and the effect of their traditions on the community
- Some significant local problems of conservation and land use
- The future of this community

Skills of investigation in the field are an essential part of geographic studies and the use of topics on the community will provide many ways of employing field-study techniques. Students can design and construct simple instruments for the collection of data; they can gain practice in making accurate measurements and readings. Forms can be designed to record and translate information for analysis and explanation.

A great variety of field experience is possible and no one type can be singled out as best; all such studies, however, should be significant to students, well planned, and integrated into work being done in the classroom. There are numerous occasions when a half hour in the vicinity of the school will secure adequate observations. Half and full-day programs enable students to go farther afield and gain more detail for explanation. Longer trips can put students into physical and cultural environments that are markedly different from their own. Often it is possible for students to gather data in conjunction with normal daily routines.

In a number of Ontario communities, steps have been taken to identify local resources and to make these more accessible to teachers. Program consultants of the Ministry of Education are able to describe the experiences of local committees in developing kits of materials and teaching aids in a number of communities across the province. Other communities have developed comprehensive lists of local human and natural resources. This information assists students and teachers in their planning of locality studies.

As students undertake studies of more remote environments, their experience with and understanding of data collection become more important. Increasingly, they rely on information that comes in abstract forms. Familiarity with techniques of mapping, sketching, taking photos, interviewing, and writing will help to make the selection and interpretation of data provided by others more vivid and significant.

North America

For centuries, the landscapes of North America remained virtually undisturbed by man. The native peoples adapted to the opportunities offered by the land for sustaining life and organizing society. Unique cultures were developed in the forests, plains, mountains, deserts, and coasts that they occupied.

In this first year, students are invited to study North America as it is today. In many areas, they will find only traces of the natural landscapes and native peoples. With the arrival of immigrants in numbers during the seventeenth century, new political systems, new attitudes, and new technologies were applied to produce a series of landscapes made infinitely more complex by the work of man.

To study all of the many North American landscapes today would be an impossible task for a year's work. The themes that follow suggest ways in which units can be developed to meet a variety of planning objectives. Teachers and students can use these or others of their own devising to develop a balanced course. Some themes are broad enough to permit the North American perspective to be retained. Without investigation into the day-to-day activities of people, however, students cannot gain insight into real situations or discover the supporting detail that makes a broader generalization valid. Classes are urged, therefore, to consider the advantages of using a variety of scales in the planning of a course.

Population Patterns

One starting point for this study might be an examination of maps. The obvious atlas map is one on population, but road maps or topographic maps can serve equally well for raising questions about where people live.

This study asks many questions. How many people are involved? What do they do to earn a living? How are they supplied with food, clothing, and shelter? How is one area connected with another? Why do densities vary from place to place? Why are some locations more attractive than others?

In finding answers, students will come into contact with many of the factors that influence population density and distribution. Historical development, resource base, water supplies, site, location, and government decisions are but a few.

One important part of the study might be an analysis of cities and the factors affecting their development.

Battles in the Sky

Frequent confrontations between air masses with different characteristics provide much of Ontario with some of the world's least predictable weather. Seldom does a week pass without significant changes in insolation, cloud cover, temperature, and humidity. Discovery of how changeable our weather is may begin with the daily recording of data over a period of time. Tracing the source and flow of air masses will show students that circulation of the atmosphere creates patterns of ebb and flow. Study of the numberless ways in which weather and climatic phenomena influence our daily activities will show the inescapable consequences of climatic controls on men's lives.

Other natural phenomena that influence the activities of men are vegetation and soil types. Students may wish to examine and find explanations for the close correlations of climate, vegetation, and soils.

Leisure Time

For many, urbanization seems to have created not only affluence but also the desire to escape the city on occasion for rest or recreation. The choice of places to visit is largely determined by the variety and proximity of recreational landscapes and by individual tastes. The need for places to ski, camp, swim, sail, waterski, fish, hike, snowmobile, and paint creates conflicting demands on a limited amount of space. Accommodating these and other activities makes great demands on the natural environment. Many citizens express concern that aesthetic and ecological values are given inadequate consideration.

Students might begin by investigating the factors that determine the selection of sites for national, provincial, and state parks. Other possibilities for study include the way in which man-made landscapes are developed to meet the recreational needs of people, or how technological change alters the recreational potential of various areas.

Interim draft only

Our Natural Heritage

The rapid occupation of space in North America has been accompanied by the intensive use of natural resources. Early settlers found an abundance of game, fish, furs, timber, minerals, and water. Now we are taking a second look to see whether our demands on nature have been reasonable.

This theme suggests that the people of North America have a steward's responsibility for the riches of the continent. A study could begin with an examination of the importance of some of our natural resources to everyday life. Examples might be drawn from minerals, wood, water, or soils. One procedure would be to follow the resource through its cycle of use, plotting location and distribution, then describing harvesting, processing, transporting, and marketing of the finished products. The attitudes and practices of the North American Indian in relation to nature could be explored.

This unit could explore some of our attitudes toward our resources and the practices we must adopt to get maximum benefit from them in the long run. Our natural heritage includes, of course, the scenic delights of mountain, wood, and stream which have captured the imagination of many artists, poets, and writers. Resource development projects often raise questions of choice between economic growth and quality of life. Students should distinguish between renewable and non-renewable resources and contemplate the price of unwise use.

Sharing A Continent

The benefits that North America has gained from the mingling of cultures have been countless. These extend not only into music and language, but also into the foods we eat, the clothes we wear, and the homes we live in. We cannot overlook the contributions of our native peoples whose crafts, foods, and legends have become a rich part of our heritage. Their knowledge and skills proved invaluable to early settlers.

An historical approach is one way of tracing the origins of many influences detectable in our present way of life. The part played by French, Spanish, and African people in opening North America to settlement can be recounted and evidence of their presence found.

Many parts of North America provide marked contrasts to the culture most Ontario students normally experience. Examples of the way of life of people from polar to sub-tropical latitudes and across the breadth of the continent will help to bring out the cultural diversity of the North American peoples. Many Ontario schools are benefiting from direct contact with Caribbean countries under the Project School-to-School plan. Through exchange of correspondence and classroom projects, students on both sides develop a clearer understanding of each other's cultural and geographical setting.

Teachers may wish to encourage greater interchange between their students and students in other classrooms across the continent. Project Canada is a twinning program designed to develop links between schools in Ontario and other Canadian provinces and northern territories. Information on this project and Project School-to-School is available from the Ministry of Education, Ontario.

Changing Landscapes

Much of the development of North America has been remarkable for the pace of change. Everywhere the landscape shows traces of people in a hurry. In the community, changes can usually be seen in land use, and this may be an appropriate location to show how men interact with their environment.

At different scales, studies of population shifts, land abandonment, new transportation networks, city building, or new cropping practices can show how changes profoundly affect the landscape and produce new patterns. Some students will find it worthwhile to take an area experiencing rapid change to follow this theme in a regional study; California or Southern Ontario might be good examples.

The Industrial Giant

The massive industrial complex of North America reflects the desire and the capacity of its people to manufacture in large quantities a bewildering array of goods. Because the areas of dominance in this production can be located, students can appreciate the scale at which the production takes place. Not all industries could be included, but consideration of one or two major types of industry would offer lessons on the major requirements of industrial location. Perhaps a local industry will provide a good example for study. The use and abuse of natural and human resources could be a natural extension of this study or could provide a focus for another unit.

Transportation and Communications

Any story of the occupation and development of North America must stress the importance of transportation and communication. In the early decades, waterways, rails, and roads provided the links that allowed assembly of large areas of the earth into practical political units. Latterly, elevators, motor vehicles, and aircraft have been major influences on commercial organization and life styles. Presently, our preoccupation with speed and convenience is creating social and environmental problems.

At the same time, improvements in communication have been changing our view of the world, causing it to appear smaller and smaller. This widening of our field of consciousness increases our awareness of other peoples and their needs. The diffusion of political, financial, or cultural ideas can take place almost instantaneously.

In the immediate future, equally great changes in technology will affect the lives of North Americans. A study of prospective forms of transportation and communication and how they will affect our lives could assist students to see their own future environments in clearer perspective. One particular area of interest would be the effects of changes on cities.

Power and More Power

Increasing consumption of power in the form of electricity or fossil fuels reflects the demands of most North Americans for comfort, mobility, and manufactured goods. Some students will wish to study the origin, development, movement, and relative importance of the various forms of energy. Others may wish to investigate the projected demands and discuss the problems our insatiable appetite may create in the future. Energy exchange is an area of study that has international importance.

Agriculture

Florida citrus groves, Peace River wheat fields, California vineyards, New England cranberry bogs, Jamaican sugar plantations, Alberta ranches, Wisconsin dairy farms: these are only a few examples of landscapes that North Americans have converted to agricultural use. Students and teachers will have no difficulty in finding many more.

Use of examples can show many characteristic features of North American agriculture. Among these are size of farms, cropping practices, natural hazards, degree of mechanization, seasonal rhythm of work, and harvesting and marketing techniques. Distribution maps can assist in showing how land use is influenced by natural conditions to produce certain patterns. Studies of farming using comparison or contrast techniques can be useful in determining why natural conditions are not the only factors that affect farming.

Some farm products reflect different factors of location. Dairy farming and market gardening are examples that show the importance of market location to some types of farm products.

The last fifty years have seen drastic changes in farming practices. Some consideration of the problems faced by the modern farmer could be an integral part of this study.

The North American Stage

The great landform divisions that make up the earth's crust provide the stage on which the human drama is enacted. The structure of North America provides examples of all of them, and includes the great coastal and interior plains, young high peaks and ancient folds, the foundation shield, and recent volcanics.

More important, their arrangement on the earth's surface has influenced the ways in which men have occupied and developed the continent. With the aid of maps, cross-sections, and photographs, students can see in clear detail how men use these features as they farm or fish, mine or cut trees, develop harbours or build cities. Recognizing the diversity of North American landscapes will be one objective of this study; another will be relating landform types and human activities.

This theme might be expanded to include natural vegetation and soil types, their pattern of distribution and their importance to man.

The Southern Continents

For the purposes of this guideline, the southern continents are considered to include South America, Africa, Australia, New Zealand, and Antarctica. Certain characteristics of the southern continents provide a framework for a course of study. Because these land masses occupy areas from north of the equator to the southern pole, a variety of distinctive landscapes recur from continent to continent. These encourage the examination of man's response to similar conditions in a variety of widely separated places where inhabitants are influenced by different cultural backgrounds and are existing at different levels of social and technological development.

The four broad divisions suggested in the following pages offer ideas to help classes perceive and explain recurring patterns. In this process, students will find atlases to be invaluable tools. At this stage in their development, students may need some assistance in seeing the difference between causes and effects in explaining patterns.

Patterns on the Map

Reference to atlases will show that patterns emerge from mapping such diverse information as climatic characteristics, vegetation types, population densities, and trade volumes. The southern continents provide excellent examples: the climatic pattern in Africa points to the significance of its location astride the equator; the mirror image of vegetation types in Africa reveals the strong correlations of climate, vegetation, and animal life; population maps illustrate the concentration of population along the coasts of Australia, New Zealand, and South America; sea routes connect the southern continents with their trading partners; railways reveal the penetration of commercial development into continental interiors. Patterns such as these are found across the whole of the southern continents as well as within the confines of a single region.

Each pattern requires explanation. The search for these explanations provides opportunities to see broad geographic principles. At the same time, students are given the opportunity to develop map and research skills.

Units based on examination of patterns could form either an introductory or concluding section of a course. It should be remembered, however, that questions arising out of patterns often help to set the stage for other topics under study.

The Challenges of Environment

In providing for his basic needs in any environment, man's approach varies according to the attitudes, values, organizational skills, and technological competence that he possesses. The southern continents hold examples of environments that have proven hostile to man, the native societies existing in precarious balance with nature. Even today, deserts, rain forests, and mountains hold examples of societies living in stone-age cultures, isolated from the rest of the world.

To develop a clear understanding of how climate, relief, flora, and fauna exert strong influences on the daily lives of people, students might begin with a study of a specific group in a distinctive environment; Bushmen of the Kalihari, Aborigines of Australia, Boros of the Amazon Valley, or Pygmies of Central Africa all provide excellent examples. A study of their life style could include shelter, foods, clothing, tools and weapons, language, social organization, daily routines, and culture. Such studies could be expanded to the lives of people in similar environments or to contrast with those in markedly different ones.

Students should recognize, however, that terms such as desert or polar are simply a part of climatic classifications. The world demand for resources has repeatedly introduced new sets of conditions into these lands of challenge. New technologies have been applied to solve problems of surpluses and deficiencies. In many cases, these developments have resulted in two worlds living side by side, separated by centuries of time but only by a few miles of distance. As another part of their study, students could examine the effects of outside influences on people in these environments. Commercial development was often the major cause of change. Gold, copper, diamonds, rubber, cacao, and palm oil are examples of products on which development took place. In many cases, development schemes were unsuccessful and these, too, provide examples for study.

As a concluding step, classes might consider the future of the world's difficult environments. Questions on the oil reserves of the Sahara, the food-growing potential of the rain forests, and scientific investigation in Antarctica can illustrate that difficult environments have an importance much greater than their populations would suggest. With the introduction of better medical standards, improved transportation, refrigeration, and adequate water supplies, the possibilities for intensive use of these lands are greatly increased.

Lands of Change

Beaches, swimming, golf, tennis, soccer, steak, oranges, traffic, apartments, television, movies: these are familiar things to Canadians and typical of life in southern continents as well. For a century, some parts of the southern continents have experienced economic development in pace with the advanced areas of the world and have encouraged a life style that in many ways resembles our own. These areas are usually characterized by moderated climates where men can work and play unrestricted by the harsh restraints that exist in the difficult environments.

Virtually all the moderate areas of the southern continents have been colonized and settled by immigrants from Europe. In many ways their experience was similar to development in North America. Argentina, Brazil, South Africa, Rhodesia, Australia, and New Zealand provide examples of climates and resources that were attractive to settlers from Spain, Portugal, the Netherlands, and Britain. On arrival the immigrants often used the resources of their new homelands in ways different from those of the native peoples. It is in these countries that many of the largest cities of the southern continents are located, that most of the commercial development has taken place, and that change is occurring at a rapid rate. These are countries that compete in world markets to sell foods, minerals, and fibres. They illustrate the effects of transferring European civilization into new and different environments.

Studies organized under the heading *Lands of Change* would become an important part of studies of southern continents. Teachers are encouraged to make use of materials and techniques that provide realistic glimpses into real life situations where men and environments interact. Films, photos, sample studies, personal accounts, stories, and songs can give insights and raise questions about where and how people live in southern settings.

A study of livestock raising in a variety of settings would show marked differences in economic organization and value systems. The Masai warrior, Australian stockman, Argentinian gaucho, and New Zealand dairyman all tend animals, but in different ways and for different reasons. By tracing changes in practices over time, students can reach conclusions about the effects of technology on the use of environment.

Cities and their development are important aspects of life in southern lands. Each continent has great cities: Caracas, Rio de Janeiro, Sao Paulo, Buenos Aires, Capetown, Johannesburg, Sidney, Melbourne, and Wellington are only a few examples. A study of life in an African or South American city would allow students to compare the style of urban life with their own. Newspapers and magazines printed in foreign cities can be valuable sources, whether the language is familiar to Ontario students or not. The range of student interest will certainly include sports, schools, homes, music and dance, architecture, and opportunities for employment. All cities have economic functions to support their populations and the importance of their site and economic base should be clear. In many cases serious human problems, such as the gap between rich and poor, are seen most clearly in urban settings.

Ontario students may be so accustomed to the availability of products from southern lands that they take them for granted. Tracing some commodities back to their sources may lead students into investigation of the significance of world trade to North America. Studies of the origin and movement of common consumer products such as coffee, sugar, wool, oil, or wines should lead to questions of forms of payment and exchange. Students should realize as well that with many commodities (wheat, beef, gold, copper, nickel are but a few examples) Canadians compete with southern producers in world markets.

Yesterday, Today, and Tomorrow

Each of the southern continents holds tales of exploration and development. In the historic struggle to piece together a world map, the names of Magellan and Cook, Pizarro and Orellana, Livingstone and Park, and Amundsen and Scott are prominent. Many students will wish to know more about the roles that these and other adventurers played in laying the foundation for the development of southern lands. Each country in the southern sphere has a fascinating history.

The principal purpose of this section of a course is to increase understanding of current developments in southern lands. A current events emphasis, used at intervals or as a concluding step, can help give reality to studies of areas that appear remote. Students show interest in contemporary events, especially those involving significant change or intense drama.

Great development schemes such as the Aswan Dam and Snowy Mountain Project are affecting the lives of millions in southern lands today. Reports and photographic coverage give background on such mammoth projects and the changes they will bring.

Because exploration and development of many southern areas came late in time, many unique species of plant and animal life flourished unhampered. For a variety of reasons, many of these are now threatened, and Canadian students, concerned about damage to their own environment, can appreciate the loss of the natural heritage of others.

Other issues of importance to southern nations, such as trade agreements, resource development, or regional disparities, have their parallels in Canada, and investigation of news reports and stories can highlight the current concerns of people in other lands.

These studies provide an opportunity to develop skills and methods that will serve students well in more advanced research. Issues and events may change from year to year, but the skills of accurate reading, searching out viewpoints, weighing alternative courses of action, foreseeing advantages and disadvantages, and predicting effects will have permanent value.

Europe and Asia

Because the sheer size of Europe and Asia makes it necessary to use available time wisely, suggestions for studies have been grouped into three broad categories. The first recommends units to show how physical and human forces interact within a particular setting to produce unique areas on the earth. The second views the huge land mass in its entirety, seeking to recognize some of the important relationships that exist among its many parts. The third deals with the importance of the land and its peoples to the present and future of our world.

No single type of course can meet the needs of all students, and the planning process should tailor the course to fit the student and allow for as much flexibility as possible. Therefore the emphasis within these categories or the development of alternative forms of organization is the prerogative of the teacher and his students. Care in the choice of topics and approaches will be the important factor in providing both breadth and depth in the course.

The Mosaic

Home to three quarters of the world's peoples, Europe and Asia offer virtually unlimited possibilities to students studying men and the world in which they live. Expressed in simple terms, they provide a variety of distinctive landscapes, each the culmination of centuries of human activity. The student can find examples of untapped wealth and squandered resources, ancient crossroads and critical strategic positions, cradles of civilization and jet-set meccas, or the donkey trail and the route of the supertanker. The existence of such variety over a vast land mass gives a wide scope for regional studies.

The distinctive characteristics and patterns that identify regions can take many forms; physical features, crop specialties, historical heritage, and occupations are but a few. Regional studies can be conducted on a number of scales. Large-scale regions such as the Mediterranean, industrial Western Europe, Southeast Asia, or the Indian subcontinent can be used as examples. River valleys, such as the Rhine, Indus, or Yangtze, or cities such as Paris, Vienna, Moscow, or Hong Kong, all are suitable for examination of regional characteristics. The depth and complexity of any study will depend largely upon the objectives established at the outset of the study.

In modern times, no region is independent of the rest of the world, and students will wish to see some of the historical, political, and economic connections among other places. Regional studies provide opportunities for students to work individually or in small groups, as well as in classes.

Regional studies lead naturally to comparisons and contrasts. The process of seeking similarities and differences can assist students to see how men have used opportunities in different ways. Britain and Japan, with insular positions, high population densities, manufacturing emphasis, and maritime outlook show many common characteristics. At the same time sharp contrasts can be drawn between their industrial organizations, labour relations, educational systems, and cultural traditions. An examination of the two nations could help reveal how East and West share many similarities but possess many differences.

Other possibilities for comparison and contrast might include examples drawn from agriculture, political organization, and population problems.

Patterns and Processes

Units organized under a title such as *Patterns and Processes* would encourage students to study Europe and Asia as a whole, analysing the connections among the various landscapes and cultures that comprise the two continents. Even in biblical times, men were aware of the differences that existed from place to place on the earth's surface, and out of this awareness came the desire for interchange of goods and ideas. Often the forging of links resulted in significant strides forward in the development of civilization. Today, the process of change is accelerating. Patterns of movement connect more widely separated parts of the great land mass than in former times and processes of change are stimulated by interaction among the parts.

Migration is one example of movement. Throughout recorded history, the mosaic of Eurasian peoples has undergone dynamic change. Migrations pushed existing societies into new territories; nations consolidated and expanded militarily to become civilizations; religious and cultural movements swept across human and natural boundaries; economic and military alliances were forged and broken.

The twentieth century has added an increasing exchange of energy, capital, technical skills, services, and culture to the traditional flow of food, raw materials, and manufactured goods. Groups of nations have formed associations or signed agreements that make exchange easier.

Today these processes continue. In developing a perspective on Europe and Asia as a whole, a number of questions may suggest starting points for studies:

- What military or economic alliances now exist? What conditions brought them into existence? In what ways do they serve the purposes of their member countries?
- Is migration still a common occurrence in Europe and Asia? Why does the movement take place? Are there problems associated with the relocation of people in the twentieth century?
- What commodities move from one area of Eurasia to another? How are these moved? How is payment arranged? How important are the links to both parties?
- What types of cultural exchange are taking place in the land mass today? Can examples be drawn from the arts, business, communications, politics, technology, and religion?
- Does co-operation exist between Eurasian nations for humanitarian reasons? Are there other problems that could be solved by greater co-operation? Are there areas where crisis exists?

These questions may help to identify broad areas of concern. The studies that are chosen can complement other units as part of a year's work. Often contemporary events can provide an excellent introduction to the development of a topic.

The World's Destiny

The population and extent of Europe and Asia make events occurring there of importance to all other areas of the world. A review of the twentieth century provides numerous examples of drastic changes in the course of world affairs that had their genesis in Europe and Asia; two world wars, the rise of communism, and the death throes of empires are just a few of many outstanding examples.

A characteristic feature of recent history has been the strengthening of links among the nations of Europe, Asia, and the rest of the world. Improved transportation and communication is shrinking the world to make neighbours of all people. As the pressure of population growth makes increasing demands on the world's resources, ties of commerce are binding segments of the world more closely together.

Canadians are reminded of developments in the daily news. Foreign fishing fleets make regular visits to Canadian coastal waters; increasing competition from European and Japanese manufacturers is felt by auto manufacturers; investment in Canadian raw material sources originates from across both the Atlantic and Pacific.

Of course, economic developments are not the only basis for organization of studies; Canadians are affected by cultural, military, and political developments as well. In organizing their course work, students and teachers should make use of the flexibility that the three broad categories of studies afford. Topics that are current and vital at one time — Berlin, the Middle East, the Green Revolution — are supplanted by other issues at other times. Teachers and students can weigh the value of using blocks of time to see Eurasia in the world setting or allotting time to studies as the need to explore an issue arises.

In addition, it should be remembered that most Ontario students can trace their families back to origins in Europe or Asia and that for many close personal associations still exist.

No geographical studies are more important to students than those based on their own country. Their futures are bound up in the destiny of Canada and Ontario students have a high stake in its future. Ontario occupies a central position and has more people than any other province. It is one segment of Canada that benefits from associations with all the others.

In spite of the multitude of natural resources with which Canadians have been endowed, few would suggest that Canada offers a natural unit on which a nation could develop. In fact, Canada exists seemingly in defiance of any logical arrangement of assets.

Studies in geography, however, can never focus simply on the physical features of a country. Most important are the people, their attitude towards their land, the society they create in it, and the bonds they establish among its parts. Therefore, a course in Canadian geography for Canadians should never consist of simply listing facts and locating places. It must entail an examination of Canada as a whole, observing and interpreting the patterns of man-land development that have taken place. Students must be actively involved, using materials, gathering data, and drawing conclusions based on contemporary thought and opinion.

In this guideline, a number of themes have been suggested as starting points for organization of studies. It is hoped that teachers will develop these few ideas to suit the needs of their students and develop other ideas as the need arises and student interest develops.

As a beginning, many classes will want to see how their own locality fits into the mosaic that is Canada. Examination of the factors that give each area its unique character can assist in understanding the many variables that make other areas unique.

A Land of Physical and Cultural Diversity

Canadians have been blessed with a remarkable land. Within its expanse are high mountains, broad plains, vast forests, and swift rivers; off its shores lie productive seas.

The marked differences in bedrock, surface features, climate, vegetation, and soils make it possible to identify a number of physical regions, each with a unique set of characteristics. Attracted by the opportunities these landscapes provide, settlers have come to populate them. Being of widely varied backgrounds, they placed new imprints on the Canadian landscape and brought new cultures to enrich the Canadian experience.

As one purpose of their year's work, students should seek to comprehend the many ways in which the human and natural elements have interacted to develop distinctive Canadian regions. To achieve this, the best methods will aim to give students accurate impressions. Among these will be the use of accounts, sample studies, pictures, films, air photos, atlases, and topographic maps.

Where We Live

Sparse numbers and uneven distribution are two significant characteristics of Canadian population. On a broad scale, there are differences in pattern and density. On detailed examination areas show differences resulting from early survey patterns and cultural differences, as well as from physical features. There are many examples that can show the various factors that affect settlement pattern and density.

Because an increasing percentage of Canadians are becoming urban dwellers, many students will want to become familiar with the growth and functions of urban areas. Special emphasis might be given to our largest metropolitan areas and our major ports. These man-made environments may be more representative of the world than of Canada alone.

Included as a part of any study of population should be a study of native people. Their past response to the environment, the disruption of their way of life after contact with Europeans, and their aspirations should be understood by all Canadians.

The Storehouse

In the twentieth century, resource development has become a complex undertaking involving capital, technology, labour, transportation, and energy. While much of Canada's economic development has been based on the exploitation of natural resources, the people harvesting the resources have usually been far removed from the mainstream of Canadian life and remote from the populated heartland. On the other hand, the densely populated areas have tended to take the flow of resources from rocks, trees, water, and soils for granted. Until recently, most Canadians have been unconcerned about problems of supply or foreign involvement.

In view of the world demand for resources in the future, Canadians will have to make difficult decisions concerning their abundant supplies of fish, minerals, wood, and energy. Students need a clear understanding of resource development in a Canadian context. The need for sound conservation practices should form a part of this topic. This would include consideration of the best use of resources, preservation of natural environment, satisfactory disposal of wastes or by-products, and re-use of many goods.

Many approaches to these studies are possible. For instance, students can take a mineral and examine its location, extraction, refining, and marketing. Another approach is the exploration of a problem: *Should we sell water to the U.S.?* or *Should we continue to subsidize gold mining?* In all cases, however, students should see the complexity of the decisions involved.

Transportation Bonds

Given the size, wealth, and diversity of Canada, there must be an exchange of goods within the country and across its borders.

Distance and physical barriers have made the cost of transportation links an important factor in our economic development. In fact, the cost of transportation and communications facilities has been an important political issue throughout our brief history. There is no doubt, however, that the threads of rail, road, pipeline, air routes, and waterways help to tie us together into nationhood. Along with the unifying force of our communications networks, the different forms of transportation are related to Canada's size and needs.

The patterns that Canadian transportation links take on a map will raise many questions concerning source, destination and route, transportation technology, and problems. Most have interesting historical aspects as well.

Canadian Frontiers

Unlike the situation in the United States, frontiers are still very much a part of the Canadian scene. Mining, forestry, and recreational frontiers, with accompanying transportation and power developments, are advancing northwards. The agricultural frontier is, in places, retreating. Northern penetration is accompanied by an increasing awareness of our obligation to native peoples, of the need for wise use of our resources, and of the ecological frailty of the north. As new developments or discoveries take place, the objectives of industrial society clash with those of native peoples and the setting is altered for plant, animal, and human life. The question of man's responsibility towards the land and towards his fellows then needs re-examination.

The frequency of controversies about frontier development schemes is a good indicator of the strong feelings Canadians harbour towards the land. Recent examples of development in the Canadian North can provide students with good examples of the many aspects of development issues.

A Land of Change

The present may be viewed as the end result of a long process, but it is not a final state for Canada. Everyday human intervention can bring about changes in the direction of economic or political development. Using current statistics, newspapers, and periodicals, students can become aware of the trends in all aspects of Canadian life. Agriculture, mining, fishing, forestry, transportation, manufacturing, construction, urban growth, and technology are all areas in which changes are taking place daily. The availability of up-to-date material is important if students are to grasp the dynamic quality of Canada's development. There is need for a contemporary emphasis in all courses on Canada.

Certainly it is valid to question many of the policies we follow in Canada and the attitudes we hold towards them. Students who are well informed will be able to see and weigh the alternatives open to us in the future. Rational projections of trends and consideration of alternative courses of action should be a part of Canadian studies.

References

Because there is a wide variety of resources available and because each school will wish to develop a unique program, no comprehensive list of resources has been included in this guideline. Teachers seeking help in assembling teaching resources may find the following information useful.

Circular 14, Textbooks and **Circular 15, Canadian Curriculum Materials** are published annually by the Ministry of Education and distributed to Ontario schools. The choice of textbooks for class use should be made after study of the books listed in Circular 14 and its supplements. Circular 15 lists multi-media resources produced in Canada with application to Ontario curriculum guidelines.

Included on page 22 are the addresses of regional offices of the Ministry of Education, which through the program consultants, are prepared to offer assistance to schools in the identification of other resources for school programs. These include sources of maps, atlases, aerial photographs, films, and equipment, as well as other bibliographic and resource information.

A number of periodicals and annual publications have proven useful either for student or teacher reference. Schools may wish to subscribe to these and include them in school resource centres. A brief annotated list is presented below. Many schools find it worthwhile to obtain selected trade magazines and business letters as well. These often include current information that is pertinent to school programs.

Canadian Georgraphical Journal Royal Canadian Georgraphical Society, 488 Wilbrod Street, Ottawa K1N 6N5, Ontario.

Each monthly issue deals with a few selected topics in geography. Most topics relate to Canada.and can be read easily by students.

Current Events, American Education Publications, 245 Longhill Road, Middletown, Conn. 06457, U.S.A.

A student publication issued thirty times yearly, this brief magazine gives an American view of current events and issues. A teacher's edition is available.

The Geographical Magazine, I.P.C. Magazines Ltd., New Science Publications, 128 Long Acre, London, WC2E 9QH.

Published monthly, this magazine contains illustrated articles of wide-ranging interest. Easily read by students, it includes book reviews and articles on current events that will be of interest to teachers as well.

Journal of Geography, National Council for Geographic Education, Room 1226, 11 West Washington Street, Chicago, Illinois, 60602, U.S.A.

This monthly journal contains information that is of interest primarily to teachers. Articles often deal with geography as a discipline and as a school subject.

The Monograph, Ontario Geography Teachers' Association, The Editor, 154 Windermere Avenue, Toronto, Ontario.

The Monograph is published four times yearly and contains articles and features of specific interest to Ontario teachers.

New Commonwealth and World Development, New Commonwealth Publishers Ltd., 415 Fitzroy Square, London W.I., U.K.

Each monthly issue focuses on commercial and economic development in some area of the world. Teachers may find it useful as a source of facts and figures.

Synopsis, Curriculum Innovations Inc., 1611 Chicago Avenue Evanston, Ill. 60201, U.S.A. (Canadian Agents: Educators Supplies Ltd., 105 Falcon Street, P.O. Box 43, London 35, Ontario.)

Published every second week, this small student magazine provides newspaper reprints, cartoons, and short articles on current events. Each issue deals with a topic relevant primarily to the United States and applicable to Social Studies programs. The teacher's edition includes a Canadian supplement and provides teaching ideas and questions.

Teachers in search of current information may wish to recommend the inclusion of a number of the following publications in the resources of the school.

Canada: The Official Handbook of Present Conditions and Recent Progress. (Current Edition), Bureau of Statistics, Information Canada, Ottawa.

Each year this inexpensive publication gives a concise view of recent social and economic developments in Canada. The simple statistics and graphs are often useful to teachers.

Canada Year Book (Current Edition), Bureau of Statistics, Information Canada, Ottawa.

This large volume provides accurate information on many aspects of Canadian affairs. Much of the information has applications in Geography courses.

Information Please Almanac Atlas and Yearbook (Current Edition), Simon and Schuster, New York, N.Y.

Maps, statistics, and informed opinion are included in each edition. The scope of interest is worldwide, but the presentation reflects an American viewpoint.

Pocket Data Book U.S.A. (Current Edition), Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Published biennially and incorporating material from the U.S. Bureau of the Census, this slim booklet provides current information on a wide variety of topics often in statistical form.

Quick Canadian Facts: The Canadian Pocket Encyclopedia. Quick Canadian Facts Ltd., Toronto, Ontario.

Published annually, this slim volume provides a handy reference for Canadian information.

The Stateman's Yearbook (Current Edition), The Macmillan Company of Canada Ltd., Toronto, Ontario.

This volume provides current facts and figures on the world's nations.

The World Almanac and Book of Facts (Current Edition), New York World Telegram, New York, N.Y.

A useful source of facts and statistics, this volume provides a handy reference for teachers and students.

Regional Offices of the Ministry of Education, Ontario

Region 1, Northwestern Ontario
303 News Chronicle Building,
2 Water Street South,
Thunder Bay "P", Ontario

Region 2, Midnorthern Ontario,
1349 Lasalle Blvd.,
Sudbury, Ontario

Region 3, Northeastern Ontario,
P.O. Box No. 3020,
North Bay, Ontario

Region 4, Western Ontario,
1-759 Hyde Park Road,
London, Ontario N6H 3S6

Region 5, Midwestern Ontario,
279 Weber Street North,
Waterloo, Ontario

Region 6, Niagara
15 Church Street, Suite 402,
St. Catharines, Ontario

Region 7, West Central Ontario
40 Eglinton Avenue East,
Toronto, Ontario.

Region 8, East Central Ontario,
Heron's Hill Building, Suite 3201,
2025 Sheppard Avenue East,
Willowdale, Ontario

Region 9, Eastern Ontario
1082 Princess Street,
Kingston, Ontario

Region 10, Ottawa Valley,
1825 Woodward Drive,
Ottawa K2C 0R2, Ontario

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